

REMARKS

Applicant has studied the Office Action dated December 29, 2006 and has made amendments to the claims. It is submitted that the application, as amended, is in condition for allowance. Claims 1-10 are pending. Claims 1, 4, and 7 have been amended. Reconsideration and allowance of the claims in view of the above amendments and the following remarks are respectfully requested.

The specification has been carefully amended to correct minor typographical errors. No new matter has been added.

The drawings were objected to because they contained element boxes that were not labeled. Please substitute the attached Replacement Sheet of drawings for the corresponding original sheet. Figures 1 and 2 have been amended to label the element boxes as requested by the Examiner. No new matter has been added. In light of these amendments, it is submitted that the objection to the drawings should be withdrawn.

The abstract of the disclosure was objected to for including the title. The abstract has been amended to remove the title and to correct minor typographical errors. No new matter has been added. It is submitted that the abstract now fulfills the requirements of MPEP § 608.01. Therefore, it is respectfully submitted that the objection to the abstract should be withdrawn.

Claims 1-10 were rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Claims 1-10 were also rejected under 35 U.S.C. § 112, first paragraph, because one of ordinary skill in the art would not know how to use the claimed invention. These rejections are respectfully traversed.

The Examiner stated that claims 1-10 "disclose a process (method)", and that the "claims are merely doing signal manipulation with no practical application." First, claims 1-6 are device claims, not method claims. Independent claim 1 recites a Phase-Locked Loop circuit with a

specific structure, and independent claim 4 recites a digital mobile radio communication apparatus that includes at least one Phase-Locked Loop circuit with a specific structure. More specifically, claims 1 and 4 each recite that the Phase-Locked Loop circuit includes specific physical elements (such as charge pumps, filters, and voltage controlled oscillators) that are coupled together in specific ways. Thus, claims 1-6 are not directed to processes, but recite Phase-Locked Loop circuits with a specific structure.

Further, due to their claimed structure, the Phase-Locked Loop circuits recited in independent claims 1 and 4 overcome the mismatch problems between the main charge pump and the calibration charge pump that are present in conventional Phase-Locked Loop circuits. Phase-Locked Loop circuits are currently used in many different types of digital systems to synthesize frequencies in a digital way. Thus, an improved Phase-Locked Loop circuit that overcomes a problem with currently-used Phase-Locked Loop circuits would be very useful for replacing such currently-used Phase-Locked Loop circuits so that the digital system does not suffer from such a problem. Applicant completely fails to understand how the improved Phase-Locked Loop circuits recited in claims 1-6 could possibly only disclose a process that merely performs signal manipulation, or have no practical application.

With respect to claims 7-10, independent claim 7 recites a method for synthesizing frequencies in a digital system using a Phase-Locked Loop. This method includes steps of providing a Phase-Locked Loop circuit with a specific structure, and applying signals to this Phase-Locked Loop circuit so as to synthesize frequencies in the digital system using the Phase-Locked Loop. Phase-Locked Loop circuits are currently used in many different types of digital systems to synthesize frequencies in a digital way. A method for using an improved Phase-Locked Loop circuit and to synthesize frequencies in the digital system from applied input signals is very useful for many different types of digital systems. Thus, the recited method has a practical application. Further, the recited method does not merely perform signal manipulation. The recited method is implemented with respect to a specific physical circuit because it requires that a Phase-Locked Loop circuit with a specific structure be provided, that signals are applied to specific physical elements of the circuit, and that this causes the synthesization of frequencies in the digital system.

Therefore, it is respectfully submitted that the rejections of claims 1-10 under 35 U.S.C. § 101 and under 35 U.S.C. § 112, first paragraph, should be withdrawn.

In view of the foregoing, it is respectfully submitted that the application and the claims are in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is invited to call the undersigned attorney at (561) 989-9811 should the Examiner believe a telephone interview would advance the prosecution of the application.

Respectfully submitted,

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